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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,463	06/25/2001	Hermanus Leonardus Peek	NL 000359	8680
27082	7590	05/19/2004	EXAMINER	
DORSEY & WHITNEY LLP 1001 PENNSYLVANIA AVENUE, N.W. SUITE 400 SOUTH WASHINGTON, DC 20004			FOURSON III, GEORGE R	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/888,463

Applicant(s)

PEEK ET AL.

Examiner

George Fourson

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Claims 9,10,13 and 14 are objected to because of the following informalities: In claims 9,10,13 and 14, "intact" has been misspelled as "in tact". Appropriate correction is required.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

It was clear that in the office action mailed 1/9/04 claims 7 and 8 are addressed in the rejection of claims 1-6 because the language "buried channels", which is addressed in the statement of the rejection, is present in only those claims. The omission was clearly a typographical error. Therefor, the rejection of claims 7 and 8 below is not a new grounds of rejection.

Claims 1 and 3-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Vadasz and Stevens.

The rejection is maintained as stated to be applied to claims 1-6 in the paper mailed 1/9/04 and as follows.

Vadasz discloses gate dielectric layer 13 to be the first dielectric layer formed and indicates that it remains as the gate dielectric, as stated in the office action mailed 1/9/04. The reference discloses that the layer is not patterned (figures 4 and 5).

Applicant argues that there is no suggestion to form the nitride layer by LPCVD. However, Vadasz was stated in the office action mailed 1/9/04 to disclose deposition of nitride on an oxide layer to form layers of a gate dielectric such as the oxide and nitride layers disclosed by Stevens. Further, Vadasz

discloses the deposition process to be a vacuum process. Applicant has not established that LPCVD is limited to any particular pressure range other than vacuum conditions.

Applicant argues that Stevens does not disclose channels running in a first direction and strip-shaped electrodes running in a second direction perpendicular to the first direction. Applicant is directed to the statement of the rejection in the office action mailed 1/9/04 and specifically to buried channel region 35 and gate electrode 37. See figures 4 and 5. Applicant's statement that "the implant forming the buried channel region 35 is ... formed by an antiblooming implant" is not well taken. Antiblooming implant 16 is a global implant prior to the channel formation step.

Applicant argues that the references are non-analogous. However, the references are combined as both addressing gate dielectric formation and going so far as to be addressing forming the same layers, namely nitride and oxide. The references are for this reason at least seen to be analogous. Furthermore, the characterization of Stevens as directed to "antiblooming structures for CCD image sensors" is encompassed by the characterization of Vadasz as "in the technical field of semiconductor integrated circuits". It is not necessary that the references disclose obtaining the same advantages or be coextensive in the scope of the disclosures.

Applicant argues that insufficient motivation has been provided. It is agreed that the fact situation in MPEP section 2144.07 is not identical to the instant fact situation. However, the instant situation is seen to be sufficiently analogous to the situation therein to justify application of the logic to the instant fact situation.


**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (571) 272-2800. See MPEP 203.08.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner George Fourson whose telephone number is (571)272-1860. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri, can be reached on (571)272-1855. The fax number for this group is (571)273-0224 and the customer service number for group 2800 is 571-272-2815. Updates can be found at <http://www.uspto.gov/web/info/2800.htm>.

  
George Fourson  
Primary Examiner  
Art Unit 2823

GFourson  
May 14, 2004